DEPARTMENT OF ECOLOGY
State of Washington

Application for a State Waste Discharge Permit to Discharge Domestic Wastewater to Ground Water by Land Treatment or Application

This application is for a state waste discharge permit as required by Chapter 90.48 RCW and Chapter 173-216 WAC. Permit applications provide Ecology with information on pollutants in the waste stream, materials that may enter the waste stream, the flow characteristics of the discharge, and site characteristics at the point of discharge.

Ecology may request additional information to clarify the conditions of this discharge. The applicant should reference information previously submitted to Ecology that applies to this application in the appropriate section.

SECTION A. GENERAL INFORMATION

1. Applicant Name:
2. Facility Name:
   (if different from applicant)
3. Applicant Address:
   Street

   City/State Zip
4. Facility Location Address:
   (if different from above) Street

   City/State Zip
5. Latitude/longitude of the processing facility as decimal degrees (NAD83/WGS84):
   _____ / _____
6. Latitude/longitude of sprayfield/infiltration site discharge location (approximate center) as decimal degrees (NAD83/WGS84):
   _____/ _____
7. Person to contact who is familiar with the information contained in this application:

Name Title

Telephone Number Fax Number Email

FOR ECOLOGY USE ONLY	**Check One**	New/Renewal ☐ Modification ☐
Date Application Received _____		Application/Permit No. _____
Date Application Accepted _____		Date Fee Paid _____

8. Check One:

☐ **Permit Renewal** (including renewal of temporary permits)

Does this application request a greater amount of wastewater discharge, a greater amount of pollutant discharge, or a discharge of different pollutants than specified in the last permit application for this facility? ☐ YES ☐ NO

For permit renewals, the current permit is an attachment, by reference, to this application.

☐ **Permit Modification**

☐ **Existing Unpermitted Discharge**

☐ **Proposed Discharge**

Anticipated date of discharge:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and/or imprisonment for knowing violations.

Signature*	Date	Title

Printed Name

*Applications must be signed by either a principal executive officer or a ranking elected official. If these titles do not apply to your organization, the person who makes budget decisions for this facility must sign the application. For state facilities, this is typically a program manager.

The application signatory may delegate signature authority for submittals required by the permit, such as monthly reports, to a suitable employee. You can delegate this authority to a qualified individual or to a position, which you expect to fill with a qualified individual. If you wish to delegate signature authority, please complete the following:

Signature of delegated employee	Date	Title or function at the facility

Printed name

SECTION B. TREATMENT PLANT INFORMATION

1. Identify all industries, commercial facilities or communities discharging to this publicly owned treatment works (POTW) by name, type of industry, address, telephone number and contact name. Attach extra sheet(s) if needed and label as attachment B1.

	INDUSTRY #1	INDUSTRY #2
NAME:		
INDUSTRY:		
ADDRESS:		
TELEPHONE:		
CONTACT NAME:		
INDUSTRIAL PRODUCT(S):		

2. POTW design and operation manuals available for this treatment facility:

Type of Manual	Date	Is there a copy at the POTW?
☐ Engineering Report		☐ YES ☐ NO
☐ Operation and Maintenance Manual		☐ YES ☐ NO
☐ Crop Management Plan		☐ YES ☐ NO
☐ Sprayfield Management Plan		☐ YES ☐ NO

3. POTW Design Data:
   a. Average Influent Flow for Maximum Month (MGD):
   b. Influent BOD Load (lbs/day):
   c. Influent SS Load (lbs/day):
   d. Began Operation (year):
   e. Last Major Upgrade (year):
   f. Planned Upgrades (year):
   g. Design Population:
   h. Actual Population:
   i. Sprayfield loading - attach copy of the irrigation schedule if schedule if available

4. Are there plans to modify this facility within the next five years? If so, briefly describe what and when.

5. Attach a simple schematic drawing of the POTW. *(Label as attachment B.5. Attachments should be 11 x 17"or smaller).* The schematic should show all treatment processes (from B.6 below), flow direction and flow quantities in million gallons per day (MGD) or gallons per day (GPD).

6. Identify the type and number of unit processes at this facility.

Treatment	Unit Process	Number of Units
Lift stations	In collection system	
	At head of plant	
Preliminary treatment	Manually operated bar screens	
	Mechanically operated bar screens	
	Grit removal	
	Pre-aeration	
	Comminutors/grinders	
	Other *(specify)*	
Primary Treatment	Primary Sedimentation Tank/Clarifiers	
	Septic tanks	
	Other *(specify)*	
Secondary Treatment	Oxidation Ditch	
	Package Plant - Activated Sludge	
	Package Plant - Physical/Chemical	
	Aerated Lagoon	
	Non-aerated Lagoon/Facultative Lagoon	
	Rotating Biological Contact	
	Secondary Clarifiers	
	Trickling Filter	
	Polishing Ponds	
	Other *(specify)*	
Additional Treatment	Coagulation	
	Filtration	
	Storage (Lined Lagoon)	
	Storage (Unlined Lagoon)	
	Other *(specify)*	
Land Treatment or Application	Drainfield	
	Rapid Infiltration/Infiltration Lagoon	
	Constructed Wetland	
	Sprinkler Irrigation	
	Flood Irrigation	
	Ridge and Furrow Irrigation	
	Subsurface Irrigation	
	Other *(specify)*	
Disinfection	Chlorination	
	Ultraviolet	
	Other	

SECTION C. WASTEWATER INFORMATION

1. The average influent flow to the plant for the maximum month for at least the last 12 months: gallons/day

2. The maximum daily flow applied to the land treatment/application site for the last 12 months: gallons/day inches/acre/month

3. Describe how the influent and effluent flow are measured?

4. Attach flow records for at least the last 12 months. *(Label as attachment C.4.)*

5. Describe the collection method for the samples analyzed below (*i.e.*, grab, 24-hour composite). Applicants must collect grab samples (not composites) for analysis of pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform (including E. coli), and Enterococci (previously known as fecal streptococcus at § 122.26 (d)(2)(iii)(A)(3)),or volatile organics.

6. Provide measurement values or range of measurements for treated wastewater prior to land treatment/application for the parameters with an "X" in the left column of the table below. If you obtain the application from the Internet, contact Ecology's regional office to see if testing for a subset of these parameters is permissible. All analyses (except pH) must be conducted by a laboratory registered or accredited by Ecology (WAC 173-216-125). If this is an application for permit renewal, provide data for the last year for parameters that are routinely measured. For parameters measured only for this application, place the values under "Maximum." Report the values with units as specified in the parameter name or in the detection level.

   The Permittee must use the specified analytical methods, detection limits (DLs) and quantitation levels (QLs) in the following table unless Ecology approves an alternate method or the method used produces measurable results in the sample and EPA has listed it as an EPA approved method in 40 CFR Part 136. If the Permittee uses an alternative method as allowed above, it must report the test method, DL, and QL on the discharge monitoring report or in the required report.

X	Parameter	Measurement Values			Number of Analyses	Analytical Method Std. Methods 19th, 20th edition or EPA	Detection Limit/Quantitation Level
		Minimum	Maximum	Average			
	BOD (5 day)					SM 5210 B	/2 mg/l
	COD					SM 5220 D	/10 mg/l
	Total suspended solids					SM 2540 D	/5 mg/l
	Total dissolved solids					SM 2540 C	
	Conductivity (micromhos/cm)					SM 2510 B	
	Ammonia-N as N					SM 4500-NH_3 C	/0.3 mg/L
	pH					SM 4500-H	0.1 standard units
	Total Residual Chlorine					SM4500-Cl G	50/ µg/L L
	Fecal coliform (organisms/100 mL)					SM 9221 E or 9222 D	
	Total coliform (organisms/100 mL)					SM 9221 B or 9222 B	
	Dissolved oxygen					SM 4500-O C/G	
	Nitrate + nitrite-N as N					SM 4500-NO_3 E	100 µg/L
	Total kjeldahl N as N					SM 4500-N_{org} C/E/FG	300 µg/l
	Ortho-phosphate-P as P					SM 4500-P E/F	10 µg/l
	Total-phosphorous-P as P					SM 4500-P E/P/F	10 µg/l
	Total Oil & grease					EPA 1664A	1.4/5 mg/l
	NWTPH - Dx					Ecology NWTPH Dx	250/250 µg/l
	NWTPH - Gx					Ecology NWTPH Gx	250/250 µg/l
	Calcium					EPA 200.7	10 µg/l
	Chloride					SM 4500-Cl C	0.15 µg/l
	Fluoride					SM 4500-F E	.025/0.1 mg/l
	Magnesium					EPA 200.7	10/50 µg/l
	Potassium					EPA 200.7	700/ µg/l
	Sodium					EPA 200.7	29/ µg/l
	Sulfate					SM 4500-SO_4 C/D	/200 µg/l
	Alkalinity mg/L as $CaCO_3$					SM 2320 B	/5 mg/L as $CaCO_3$

X	Parameter	Measurement Values			Number of Analyses	Analytical Method Std. Methods 19th, 20th edition or EPA	Detection Limit/Quantitation Level
		Minimum	Maximum	Average			
	Arsenic(total)					EPA 200.8	0.1/0.5 µg/l
	Barium (total)					EPA 200.8	0.5/2 µg/l
	Cadmium (total)					EPA 200.8	.05/.25 µg/l
	Chromium (total)					EPA 200.8	0.2/1 µg/l
	Copper (total)					EPA 200.8	0.4/2 µg/l
	Iron (total)					EPA 200.7	12.5/50 µg/l
	Lead (total)					EPA 200.8	0.1/0.5 µg/l
	Manganese (total)					EPA 200.8	0.1/0.5 µg/l
	Mercury (total) pg/L					EPA 1631E	0.2/.5 pg/l
	Molybdenum(total)					EPA 200.8	0.1/0.5 µg/l
	Nickel(total)					EPA 200.8	0.1/0.5 µg/l
	Selenium (total)					EPA 200.8	1/1 µg/l
	Silver (total)					EPA 200.8	.04/.2 µg/l
	Zinc (total)					EPA 200.8	0.5/2.5 µg/l

Detection level (DL) or detection limit means the minimum concentration of an analyte (substance) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero as determined by the procedure given in 40 CFR part 136, Appendix B.

Quantitation Level (QL) also known as Minimum Level of Quantitation (ML) – The lowest level at which the entire analytical system must give a recognizable signal and acceptable calibration point for the analyte. It is equivalent to the concentration of the lowest calibration standard, assuming that the lab has used all method-specified sample weights, volumes, and cleanup procedures. The QL is calculated by multiplying the MDL by 3.18 and rounding the result to the number nearest to (1, 2, or 5) x 10^n, where n is an integer. (64 FR 30417).
ALSO GIVEN AS:
The smallest detectable concentration of analyte greater than the Detection Limit (DL) where the accuracy (precision & bias) achieves the objectives of the intended purpose. (Report of the Federal Advisory Committee on Detection and Quantitation Approaches and Uses in Clean Water Act Programs Submitted to the US Environmental Protection Agency December 2007).

7. Has the effluent been analyzed for any other parameters than those identified in question C.6, or are there other pollutants that you know of or believe to be present?
☐ YES ☐ NO

If yes, specify the pollutants and their concentration if known (*attach laboratory analyses if available and label as Attachment C.6*). *(Note: Ecology may require additional testing.)*

SECTION D. GROUNDWATER INFORMATON

Provide available data measurements or range of measurements from monitoring wells or supply wells in the area of discharge. Provide the analytical method and detection limit, if known. Provide the location of each well on the map required in E.3 below. Attach well logs when available (*label as Attachment D*). Copy this page as necessary for each well (*label as Attachment D*). Provide the latitude and longitude in decimal format.

Ecology Well Tag ID # _____ Well ID # _____ *(example MW-1)*
(exampleAAB123)
Latitude: _____ Longitude: _____
Well Elevation (to the nearest 0.01 feet) _____ Check the appropriate box; the elevation measurement is relative to: the NAVD88 standard ☐ mean sea level ☐

Parameter	Units	Range of Measurements	Number of Analyses	Analytical Method	Detection Limit
BOD (5 day)	mg/L				
COD	mg/L				
Total organic carbon	mg/L				
Dissolved Fixed Solids	mg/L				
Total dissolved solids	mg/L				
pH	Standard units				
Conductivity	(micromhos/cm)				
Alkalinity	mg/L as $CaCO_3$				
Total hardness	mg/L				
Fecal coliform	organisms/100mL				
Total coliform	organisms/100mL				
Dissolved oxygen	mg/L				
Ammonia-N as N	mg/L				
Nitrate + nitrite-N, as N	mg/L				
Total kjeldahl N as N	mg/L				
Ortho-phosphate-P as P	mg/L				
Total-phosphorus-P as P	mg/L				
Total Oil & Grease	mg/L				
Total petroleum hydrocarbon	☐mg/L ☐ µg/l				
Calcium	☐mg/L ☐ µg/l				
Chloride	☐mg/L ☐ µg/l				
Fluoride	☐mg/L ☐ µg/l				
Magnesium	☐mg/L ☐ µg/l				
Potassium	☐mg/L ☐ µg/l				
Sodium	☐mg/L ☐ µg/l				
Sulfate	☐mg/L ☐ µg/l				
Barium	☐mg/L ☐ µg/l				
Cadmium	☐mg/L ☐ µg/l				
Chromium	☐mg/L ☐ µg/l				
Copper	☐mg/L ☐ µg/l				
Iron	☐mg/L ☐ µg/l				
Lead	☐mg/L ☐ µg/l				
Manganese	☐mg/L ☐ µg/l				
Mercury	☐mg/L ☐ µg/l				
Selenium	☐mg/L ☐ µg/l				
Silver	☐mg/L ☐ µg/l				
Zinc	☐mg/L ☐ µg/l				
Depth to water level (to the nearest .01 feet)					

SECTION E. SITE ASSESSMENT

Note: The Department of Ecology Water Resources Section can be consulted for identifying wells within one mile of your site. The local library and local city or county planning offices may be helpful in providing the information required in this section.

1. Give the legal description of the land treatment/application site(s) by section/township/range and latitude/longitude (approximate center of the site; NAD83/WGS84 reference datum). Indicate the owner for each site. Give the acreage of each land treatment/application site(s). Attach a copy of the contract(s) authorizing use of(s) used land for treatment/application. *(Label as attachment E.1)*

2. If this is a new discharge, list all environmental control permits or approvals needed for this project; for example, SEPA review, engineering reports, hydrogeologic reports, , biosolids permits, or air emissions permits.

3. Attach an original United States Geological Survey (USGS) 7.5 minute topographic map or aerial photograph that shows the POTW and the land treatment/application site(s).
   USGS topographical maps are available from the Department of Natural Resources (360-902-1234), Metsker Maps (206-588-5222), and some local bookstores and internet sites.
   Show the following on this map: *(Label as attachment E.3.)*

   a. Location and name of internal and adjacent streets.
   b. Surface water drainage systems within ¼ mile of the site.
   c. All wells within 1 mile of the site.
   d. Wastewater discharge points.
   e. Land uses and zoning adjacent to the wastewater application site.
   f. Ground water gradient.

4. Describe the soils on the site using information from local soil survey reports. **Soils information is available from your county conservation district or from information contained in the sites hydrogeologic report.**.
   (Label as attachment E.4.)

5. Describe the local geology and hydrogeology within one mile of the site. Include any ground water quality data. **The local library, the sites hydrogeologic report, or soil conservation service may have this information**.
   (Label as attachment E.5.)

6. List the names and addresses of contractors or consultants who provided information, and cite sources of information by title and author.

SECTION F. SLUDGE/BIOSOLIDS MANAGEMENT AND DISPOSAL

1. If your wastewater treatment is by lagoon:

   Has the depth of the sludge been measured in the last five years?

   ☐ YES ☐ NO (IF yes, include the measurements and a map that shows the approximate measurement sites)

   Will sludge be removed from the lagoon(s) in the next five years? If so, describe the sludge, stabilization, utilization, and disposal methods. Attach extra sheets as necessary.

2. If your wastewater treatment is by methods other than lagoon:

   Do you have a Sludge Management Plan? ☐ YES ☐ NO

   Is the Plan approved by:

   ☐ Local health district? Date approved:

   ☐ Department of Ecology? Date approved:

3. Does your facility have a biosolids permit issued by Ecology? If so, please provide the permit's number and expiration date.

   Biosolids Permit number Permit expiration Date

Summary of Attachments That May be Required for This Application:
(Please check attachments that are included)

- ☐ B.5 Schematic drawing of POTW
- ☐ C.4 Flow records
- ☐ C.6 Additional effluent analysis
- ☐ D. Additional ground water data
- ☐ E.1 Copies of contracts authorizing use of land for treatment
- ☐ E.3 USGS topographic map
- ☐ E.4 Soil information
- ☐ E.5 Local geology and hydrogeology

If you need this document in a format for the visually impaired, call the Water Quality Program at 360-407-6600. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.